APPALACHIAN FOODWAYS FROM THEN TO NOW: USING TRADITIONAL FOODS TO ENHANCE DIETETIC PRACTICE

A Thesis
by
SARAH HOPE VISOCKY

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Abstract

APPALACHIAN FOODWAYS FROM THEN TO NOW: USING TRADITIONAL FOODS TO ENHANCE DIETETIC PRACTICE

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Introduction: Convenience and fast foods have slowly worked their way into the rural Appalachian diet playing a major role in increased obesity and food-related ailments. Increasing future health providers' knowledge of historical Appalachian dietary patterns and how health is perceived in their rural patients may lead to the development of culturally-sensitive diet therapy when working with rural populations.

Methods: To further verify the Traditional Southern Appalachian Diet Pyramid (TSADP) and to determine the composition of these dietary patterns, ten historical cookbooks, five ethnographic articles, and twenty-six oral history interviews were qualitatively analyzed. Food items were coded into categories on the Diet Pyramid using NVIVO Qualitative Analysis Software (QSR International, version 10, 2013).

Results: Final analysis divulges the four largest categories of the traditional Appalachian diet: home grown produce (34%), added fats and sugars (18%), sources of protein (17%), and sources of carbohydrates (16%). Within these individual categories corn, wheat, potatoes,

green beans, fat back, butter, soup beans, and pork are some of the ingredients most commonly consumed.

Discussion: Findings reveal the traditional Appalachian diet was plant-based, home-grown or gathered produce with the addition of added fats and sugars, protein, and carbohydrate sources fleshing out the diet. Future research endeavors can utilize these findings for developing culturally-sensitive nutrition interventions to measure feasibility, acceptance, and eventually health outcomes in rural patients seeking diet therapy.

Keywords: traditional Appalachian diet, rural health care

Acknowledgments

Thank you to the members of my thesis committee Melissa Gutschall, PhD, RD, LDN, Kyle Thompson, MS, RD, CNSC, LDN, Laura McArthur, PhD, RD, and Lanae Ball, PhD for your unwavering support and efforts in helping me accomplish this major milestone in both my education and career.

Dedication

I would like to dedicate this thesis to my mother who was born and raised in Appalachia on greens, beans, and cornbread and like a true mountaineer taught her children to preserve and value the mountain way of life.

Table of Contents

Foreword

Chapter 2 of this thesis will be submitted to the *Journal of Appalachian Studies (JAS)*, the official journal of the Appalachian Studies Association and a refereed, multidisciplinary journal published by the University of Illinois Press. This thesis has been formatted according to the style guidelines for that journal.

Chapter 1: Introduction

> Gardening, a traditional backbone of the Appalachian diet, influenced… eating patterns to varying extents. Despite the mountainous terrain in Appalachia, which challenges residents to find a suitable growing area, many… reported gardening in the summer as a source of healthy food. However, since the region has become dotted with small cities, many urban residents have little available land. "... If you live in the city, you don't have the yard for a garden so you have to buy what's on the shelf."[1]
>
> I don't have a single memory of dining at a restaurant with my grandmother, and I probably didn't eat in a real restaurant until I was sixteen… There were no restaurants in the town I lived in and only one sort of crummy grocery store. So you cooked what you grew, and you always knew where your food came from.[2]

Food pervades all areas of a culture. Indeed for many, food serves as both identification with a culture and the delineation between cultures. On a global scale, there is an infatuation with discovering the next best health food for weight loss or food cure-all for a myriad of diseases. Television networks broadcast almost any kind of food-related show imaginable, and particularly in industrialized countries consumers make it priority to taste the latest trending food within their communities. They revel in eating the latest triple cheeseburger and downing the newest flavor of soft drink. Consumers become hooked on this food because it is fun, cheap, and well-marketed. It is also quick to purchase, ready to eat, and saves the time needed to prepare a wholesome meal at home after a long work day. Dietary habits change, and over time this convenience food begins taking its toll on consumers' bodies.

In rural areas of the United States, the influx of fast food companies and industrial jobs across the landscape have drastically changed the food habits of people living in these locations. Dietary habits practiced a century ago are virtually nonexistent, and the bodies of today's rural populations reflect this change hosting a variety of chronic nutrition-related

conditions often in conjunction with obesity. Within rural Appalachia, recent research examined modern eating habits and their impact on health.[1, 3-8] One study focused specifically on health care and dietetics practice.[5] The result of this project was the development of a Rural Health Nutrition Practice Model (RHNPM) with four essential themes identified in examining how rural patients make decisions about food choices. These themes are: 1) access and resources, 2) sociocultural characteristics, 3) traditional foods, and 4) health behaviors.[5] The current project expounded on the third section of the RHNPM traditional foods.

Primary and secondary sources were analyzed for information about the dietary habits of rural mountaineers a century ago. First, historical cookbooks provided accounts of daily life during the previous century explaining the birth of mainstay recipes and essential food ingredients in Appalachian kitchens.[2, 9-17] Conversations with Appalachian residents raised in rural mountain communities added a second layer to cookbook offerings, providing a richness to descriptions of food customs through the voices of people who lived the traditional food culture.[18, 19] Recent ethnographically-based research projects conducted in the Appalachian region add a third and final piece for triangulating the findings of this study. Quantifying number of mentions of specific food items from these sources, this research aimed to accomplish one goal: to verify the Traditional Southern Appalachian Diet Pyramid (TSADP).[5] There are two prominent objectives from achieving this goal: 1) to use results from this study to increase cultural competency of future health professionals emphasizing the importance of understanding how rural patients make food choices related to the perceived impact they have on health, and 2) to use findings from this research to develop

interventions emphasizing the traditional plant-based diet for rural patients currently seeking diet therapy.

Results of this study reflect a traditional Appalachian diet based on home-grown or gathered produce supplemented by added fats and sugars, protein, and carbohydrate sources. Currently, these findings may be useful in developing culturally-sensitive nutrition interventions to measure feasibility, acceptance, and eventually health outcomes in rural patients seeking diet therapy. Future research might entail projects aimed at reconnecting current Appalachian populations with their traditional dietary roots to attempt slowing the growing trend of obesity and chronic diseases in this part of the United States.

Chapter 2: Article

Abstract: Historical eating patterns of rural Appalachia reflect a unique relationship between consumers and the land from which they relied for most of their sustenance. Unfortunately, as fast food restaurants and convenience stores have crept into the mountain communities of rural Appalachia, mountaineers have virtually lost connection with their culinary roots. The current health crisis prevalent in rural Appalachia reflects high rates of obesity coupled with chronic nutrition-related diseases. Historical cookbooks and oral histories are telling in their accounts of traditional Appalachian food practices. Results of this research reveal the traditional Appalachian diet was plant-based, home-grown or gathered produce with the addition of added fats and sugars, protein, and carbohydrate sources fleshing out the diet. Reconnecting Appalachian populations with historical, nutrient-dense dietary patterns may slow the growing trend of obesity and food-related ailments. Findings can be used for developing culturally-sensitive nutrition interventions to measure feasibility, acceptance, and eventually health outcomes in rural patients seeking diet therapy.

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Rural Appalachian Foodways from Then to Now: Using Traditional Foods to Enhance Dietetic Practice

Introduction

The eastern, mountainous portion of the United States known as Appalachia spans a portion of thirteen states and encompasses 420 counties.[20] For the purposes of this research, traditional eating habits associated with the Traditional Southern Appalachian Diet Pyramid (TSADP) refer specifically to the Appalachian region of western North Carolina. As a result of the harsh climate of this area of the country, historical dietary patterns are largely based on Native American, African, and European immigrant influences. Grown, gathered, and hunted from the land, rural Appalachian eating habits relied almost entirely on home grown or raised foods.[13, 18, 21-24] Unfortunately as fast food restaurants and convenience stores have cropped up in the mountain communities of rural Appalachia, mountaineers have virtually lost connection with their culinary roots.[3-5, 25, 26] Previous research suggests that the loss of this regional food identity has sparked the current health crisis prevalent in rural Appalachia which reflects high rates of obesity coupled with chronic nutrition-related diseases.[1, 3]

The research at hand used qualitative inquiry and analysis of historical cookbooks, recent ethnographic research, and oral histories to glean information about food choices in the early part of the 1900's when traditional eating habits were practiced. This research concentrated on addressing one essential goal: to verify the Traditional Southern Appalachian Diet Pyramid (TSADP).[5] Two long-term objectives have been identified for utilizing findings: 1) to increase cultural competency of future health professionals by striving to understand rural patients' food choices and the perceived impact they have on health, and 2) to develop interventions emphasizing the traditional plant-based diet for rural patients currently seeking diet therapy. Findings can be utilized to develop culturally-

sensitive nutrition interventions to measure feasibility, acceptance, and eventually health outcomes in rural patients seeking diet therapy.

Background

The Blue Ridge Mountains of western North Carolina are considered the harshest portion of Appalachia because of the diverse environmental conditions making agricultural success very difficult to achieve.[22] For this reason, traditional Southern Appalachian dietary patterns developed in large part due to the influence of the physical environment of the region and human adaptation to and dependence upon both plants and animals that would survive the unforgiving climate.[22] Heavily influenced first by Cherokee and other Native American tribes in addition to African influence from the earliest days of indentured servitude and slavery, dietary patterns commonly seen in Appalachia were also molded by European immigrants, the vast majority bringing foods from their home countries of Germany, Ireland, Scotland, and England.[22, 23, 27, 28]

As far back as the 1500's, corn, beans, squash, and tomatoes dominated the traditional Native American diet supplemented by hunted game and wild plants, fruits, and nuts foraged from the mountains.[16, 22] From the mid-1500's through the mid-1700's, the influx of West Africans for labor added foods such as rice, okra, greens such as collards and turnips, peanuts although these were originally from Central America, and new methods of preparing corn.[27] Continuing to rely on corn as a main dietary staple during the early to mid- 1800's, European immigrants added foods such as Irish potatoes and cabbage and began keeping herds of free-range hogs and cattle for dairy products and domesticated sources of protein.[15, 16, 22-24]

Previous research examining the diets of residents of rural Appalachia in the early 1900's shows that traditional dietary patterns continued to follow those of Native American and Africans combined with European influence.[13, 27-29] Meals consisted of a variety of protein sources including soup beans grown in family gardens, eggs from the family chicken coop, pork raised on farms, and hunted wild game.[5, 6, 9, 13, 21, 22, 30, 31] Cooked with lard rendered from home-slaughtered hogs, home grown vegetables such as turnip or collard greens, green beans, cabbage, and potatoes accompanied meals served with cornbread made from fresh ground corn, always the principal crop in the gardens of rural Appalachian populations.[6, 13, 21, 23, 30, 31] Dessert might be a berry cobbler prepared using wild or domesticated berries, butter freshly churned from milk supplied by the family cow, flour ground from home-grown wheat, and store bought sugar.[9, 13, 15, 30] Another popular dessert was apple stack cake prepared using home-made molasses to sweeten the shortbread layers and apples either grown in family orchards or picked from wild trees dotting the mountainside.[9, 13, 15, 30]

Part of the regional identity of Appalachia, the dietary patterns and physically active lifestyles familiar to rural mountain populations in the early 1900's are virtually nonexistent today. In the early part of the 20th century mountaineers grew, gathered, hunted, and prepared almost everything they consumed, but rural mountain dwellers today work mostly sedentary jobs and consume the quick convenience foods of today's fast food culture.[1, 4, 7] As major store chains, convenience stores, and fast food restaurants have taken up residence in the mountains, so have modern foods in the diets of rural Appalachian people, leading to increased prevalence of overweight and obesity coupled with chronic nutrition-related diseases.[1, 3, 4, 8, 25] Knowing this, it is increasingly important for future health care

practitioners to develop cultural competency in understanding how rural patients make food choices and relate diet to its perceived impact on their health in order to develop interventions to address these health disparities.[3, 32-34]

Recent studies with residents of Appalachia reveal several important themes when identifying culturally relevant approaches to nutrition and health care.[1, 3-8] The Rural Health Nutrition Practice Model (RHNPM) encompasses the most predominant themes, categorizing barriers to implementing interventions into four areas: access and resources, sociocultural characteristics, health behaviors, and traditional foods.[5] Traditional food plays a powerful role in establishing regional identity.[30] For this reason, it is necessary to thoroughly explore the foundation of eating habits in Appalachia since food pervades all facets of rural health care.

Access and Resources

One of the most important initial themes to understand is the socioeconomic status of the majority of rural Appalachian populations which is often at or well below the United States Census Bureau's poverty threshold[35]; and because of this, food insecurity plays a significant part in the nutritional and health status of mountain folk.[1, 6, 32] Food insecurity is often reflected in two capacities, whether due to high poverty and unemployment or due to geographic isolation. Schoenberg identified three economically-based reasons for the growing dependence on processed and fast foods in rural Appalachia.[1] These included the inability to afford fresh produce, limited access to grocery stores providing healthier options, and lack of time for gardening because the majority of rural employment is in the service industry. Mudd-Martin et al. also acknowledged the expense of fresh, whole foods in rural

supermarkets as deterrents for participants purchasing these items.[4] Low income rural consumers often purchase processed packaged foods versus fresh produce items based on the outcome of ending up with more food for less money, sacrificing nutrient-density and ultimately their health. The idea of quantity versus quality is reaffirmed by Tessaro, who reported rural Appalachians purchasing inexpensive processed foods in bulk as opposed to buying fresh ingredients for preparing meals because these foods are less likely to be on sale in large quantities.[6] Previous research indicates that increased access to quick, cheap fast foods is often general practice in rural Appalachia, suggesting that mountaineers today lack the access to and resources for obtaining fresh, home-grown fruits and vegetables like generations past.[1, 6, 8]

Sociocultural Characteristics

Another challenge in working with rural populations is that the culture of Appalachia reflects a general distrust of outsiders, especially those in government or large institutions.[21] Family--- particularly women--- serve as strategic health gatekeepers in rural Appalachian homes and communities.[7] Because of this, women play a vital role in developing an understanding of best practices for implementing nutrition interventions.[1, 6-8] Schoenberg et al. conducted research that focused on understanding rural women's perceptions of health and the factors affecting disease prevention.[7] Outcomes reflected a number of threats women perceived as most impacting health outcomes, and diet and eating habits were ranked fifth in a list of seven items. This suggests the importance of identifying what community change agents view as threats to their communities' health first, and then reframing that knowledge to include diet for disease prevention.

Emphasizing another sociocultural aspect of Appalachia which focuses on the importance of kinship and community, another study revealed that calorically dense regional food items tend to show up at special home and community events.[1] Consumption of these foods then becomes habitual in order for rural dwellers to maintain a sense of identity and belonging. Mudd-Martin et al. explored developing culturally-appropriate health interventions in rural communities, stressing the perpetuation of unhealthy eating habits as a generational phenomenon.[4] Participants in this research described having gardens in childhood but with the influx of cheap fast food restaurants into their communities, they stopped gardening as adults, choosing convenience over nutrient content. Thus, previous research reflects that sociocultural factors play an essential role in developing health care interventions in rural Appalachia, and knowing key players in the community to approach for implementing changes is important for successful outcomes.

Health Behaviors

Not only do the sociocultural characteristics of rural Appalachia drastically impact health outcomes, rural patients often fail to participate in regular health screenings. Lack of access to full service health care resources plays a major role in reduced numbers of regular preventative health care visits but the overall lack of health-related knowledge in rural populations also contributes to rural patients' poor health behaviors.[36] Previous research reflects that rural women often lack confidence and self-efficacy in making and maintaining the changes necessary to improve the status of their health and that of their families. Indeed, outcomes of one study reveal that even if women in rural Appalachia agree that diet correlates with health outcomes, they lack the proper education and skills for improving their eating habits.[36]

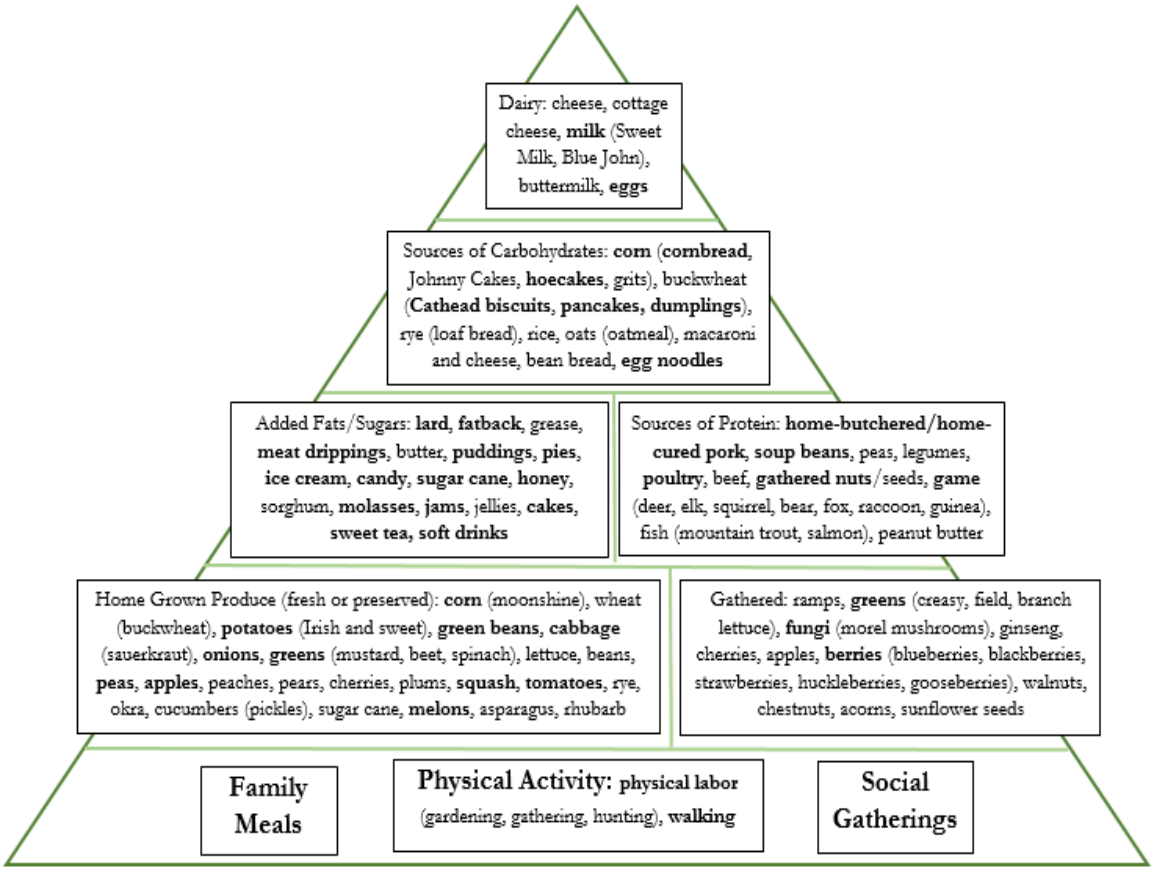
Along with a major learning curve for improving eating patterns comes the additional challenges of managing the associated resistance to change encountered from family members unwilling to accept the necessary interventions to reduce disease risk.[1, 4, 6, 37] Schoenberg and colleagues identified that resistance to change is a legitimate problem in rural patients because poor eating habits are simply not viewed as a health threat.[7] A similar study identified that the ability of rural Appalachians to manage existing conditions with a balanced diet also tends to be a challenge.[1] Outcomes showed that rural patients with multiple comorbidities reported struggling to follow diet recommendations while maintaining meal palatability associated with familiar foods. Thus, previous research indicates that health behaviors in rural Appalachian patients tend to be deeply engrained in a regional identity with diet and food preferences.[32, 37] The conclusion here is that in order for health care practitioners to change the health behaviors of rural patients, they must possess a working knowledge of traditional eating habits, expect resistance to change from patients, and counter this resistance with culturally-sensitive interventions and patient education aimed at improving health outcomes of rural patients.

Traditional Foods

Numerous studies stress the importance of gaining an understanding of how rural Appalachian populations view health and the dietary patterns necessary to improve and maintain a state of well-being.[1, 6, 37] Other studies highlight the need for developing interventions sensitive to the needs and characteristics of rural populations, ensuring that the strong cultural aspects of Appalachia relating to the importance of family and community are emphasized.[38] However, previous research fails to place any value on exploring dietary habits in a historical context.

While there is a growing movement of Appalachian natives who have taken it upon themselves to preserve traditional foods of years past via the practice of heirloom seed-saving and sharing these seeds amongst themselves, these people do not represent the majority of the rural mountain population.[21, 22, 30, 34] Gardening, the backbone of traditional Appalachia, is still practiced but to varying degrees since it is challenging for many residents of the rural mountainside due to lack of open, undeveloped land.[1] Seed savers who maintain collections of heirloom vegetable seed are usually part of the aging rural population and still adhere to a general distrust of outsiders, providing an additional challenge in revitalizing traditional gardening.[21] Furthermore, grocery stores provide sources of animal protein without the need for today's rural mountaineers to hunt or raise it themselves. This suggests that the populations of rural Appalachia today have perhaps lost the influence of the rich cultural heritage cherished by past generations of mountain residents who thoroughly depended on the land to provide nutrient-rich foods. This research has one initial goal: analysis of primary and secondary sources examining the rural Appalachian diet over the last century to further verify the TSADP (see Figure 1). Long-term, findings from this research can be used for two additional objectives: 1) to increase cultural competency of future health professionals by striving to understand rural patients' food choices and the perceived impact they have on health, and 2) to use findings from this research to develop interventions emphasizing the traditional plant-based diet for rural patients currently seeking diet therapy.

Figure 1. Traditional Southern Appalachian Diet Pyramid



Methods

Study Design

This study was designed to qualitatively analyze historical cookbooks, ethnographic articles, and transcribed oral histories to identify traditional Appalachian dietary patterns. Data were collected, coded, and analyzed from several sources including ten cookbooks, five articles and twenty-one interviews from the W.L. Eury Appalachian Collection's Oral History Project and five interviews from the Southern Foodways Alliance's (SFA) Oral History Initiative in order to triangulate the findings.[2, 6-8, 10-16, 18-24]

Published Works

The librarian at the W.L. Eury Appalachian Collection located in Belk Library on the campus of Appalachian State University in Boone, North Carolina was consulted for suggestions of the most comprehensive cookbooks on traditional Appalachian diet. These suggestions as well as a Boolean search using the words "Appalachian," "food," "culture," and "traditional Appalachian foods" revealed ten historical cookbooks to serve as a representative sampling of traditional Appalachian food recipes (see Figure 2).[2, 9-16, 31] Five previous research studies were also selected based on their pertinence to traditional Appalachian foods.[1, 6, 21, 22, 30]

Figure 2. Cookbooks

Author(s)	Title	Publisher & Location	Year
Brock, S.	*Heritage.*	Artisan; New York, New York.	2014.
Dabney, JE.	*Smokehouse ham, spoon bread, & Scuppernong wine.*	Cumberland House Publishing, Inc.; Nashville, Tennessee.	1998.
Houk, R.	*Food & recipes of the Smokies.*	Great Smoky Mountains Natural History Association; Gatlinburg, Tennessee.	1996.
Lyons, BM.	*Scratch cooking 2.*	It's the Real McCoy, Inc.; Lexington, Kentucky.	2007.
Parris, J.	*Mountain cooking.*	Edwards & Broughton Company; Raleigh, North Carolina.	1978.
Rehder, JB.	*Appalachian folkways.*	The John Hopkins University Press; Baltimore, Maryland.	2004.

Edited by Roahen S, Edge JT.	*The Southern Foodways Alliance community cookbook.*	The University of Georgia Press; Athens, Georgia.	2010.
Sohn, MF.	*Appalachian home cooking history, culture, and recipes.*	The University of Kentucky Press; Lexington, Kentucky.	2005.
Sohn, MF.	*Mountain country cooking a gathering of the best recipes from the Smokies to the Blue Ridge.*	St. Martin's Press; New York, New York.	1996.
Tartan, B.	*North Carolina and Old Salem cookery.*	The University of North Carolina Press; Chapel Hill, North Carolina.	1992.

Oral Histories

The second portion of this study consisted of a search of the W.L. Eury Appalachian Collection's Appalachian Oral History Project Interviews conducted from 1969 through 1985.[18] The researcher identified twenty-one interviews to code based on the following tags: farming, crops, farm, roots, homemade remedies, and any foods or beverages including references to moonshine. Five interviews from the SFA's Oral History Initiative were selected based on their summaries containing mentions of traditional Appalachian foods.[19]

Data Analysis

Oral history interviews and previous ethnographic studies were analyzed to quantify the number of mentions of specified traditional foods. Both sets of oral history interviews and the research article pdf files were downloaded, imported into NVIVO Qualitative Analysis Software (QSR International, version 10, 2013), and coded by the principal investigator (PI) of this study. Coding was reviewed by two co-investigators to ensure

interpretive unanimity of the information contained in the interviews and articles. Interviews were coded based on categories posited by the TSADP: home grown produce, carbohydrate sources, dairy, added fats/sugars, gathered fruits, greens, or fungi, and protein sources.[5] The following additional categories were created because the items were mentioned in multiple interviews: alcohol, coffee, and other store bought foods.

Results

Composition of Diet

Analysis of primary and secondary sources revealed the traditional Southern Appalachian diet was plant-based, home-grown or gathered produce with the addition of added fats/sugars, protein, and carbohydrate sources fleshing out the diet. There were 3,227 total number of mentions in the four largest food categories. Chart 1 shows the percentage of each food category in the traditional Southern Appalachian diet from analysis of oral histories, ethnographic articles, and cookbooks. Chart 2 reveals number of mentions of the largest four categories: home grown produce (1,289 mentions), sources of added fats and sugars (676 mentions), sources of protein (642 mentions), and sources of carbohydrates (620 mentions). Combined, these four largest categories account for 85% of the traditional diet.

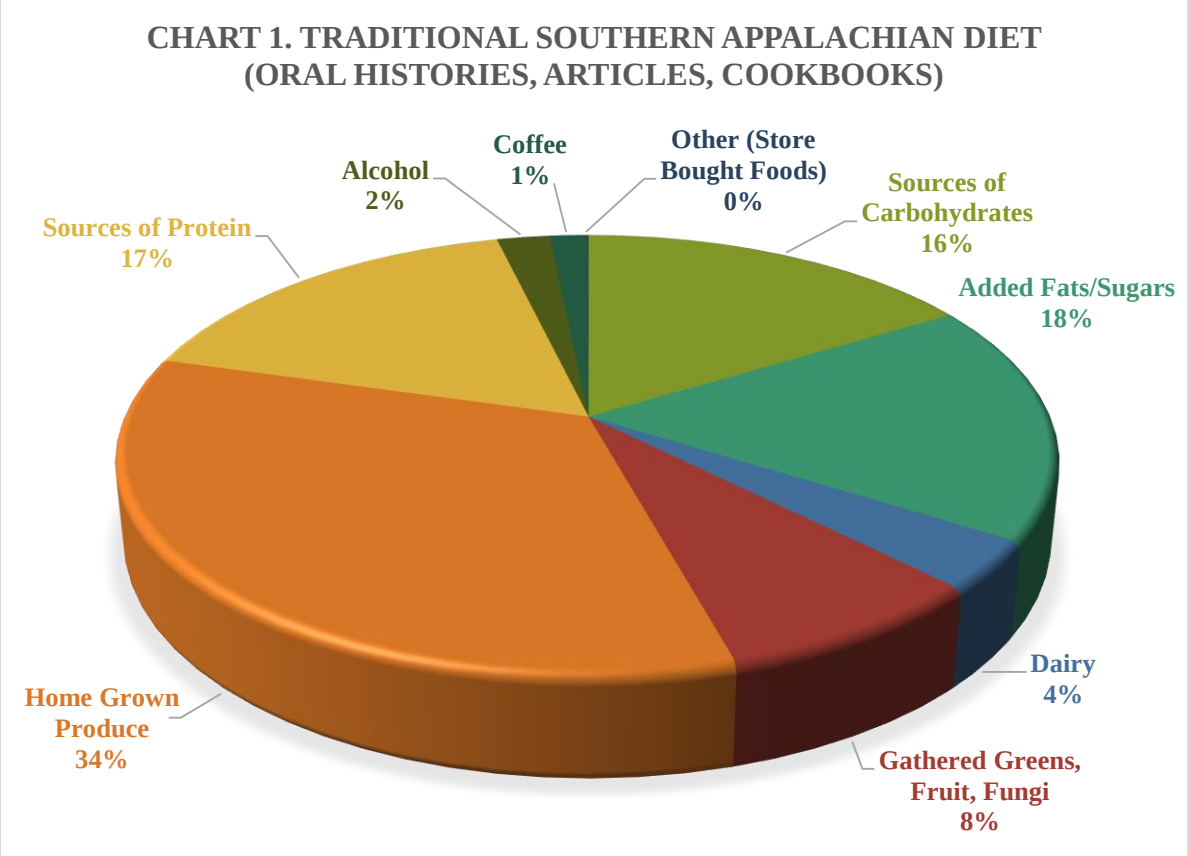


CHART 1. TRADITIONAL SOUTHERN APPALACHIAN DIET
(ORAL HISTORIES, ARTICLES, COOKBOOKS)
Alcohol 2%
Coffee 1%
Other (Store Bought Foods) 0%
Sources of Carbohydrates 16%
Sources of Protein 17%
Added Fats/Sugars 18%
Dairy 4%
Home Grown Produce 34%
Gathered Greens, Fruit, Fungi 8%

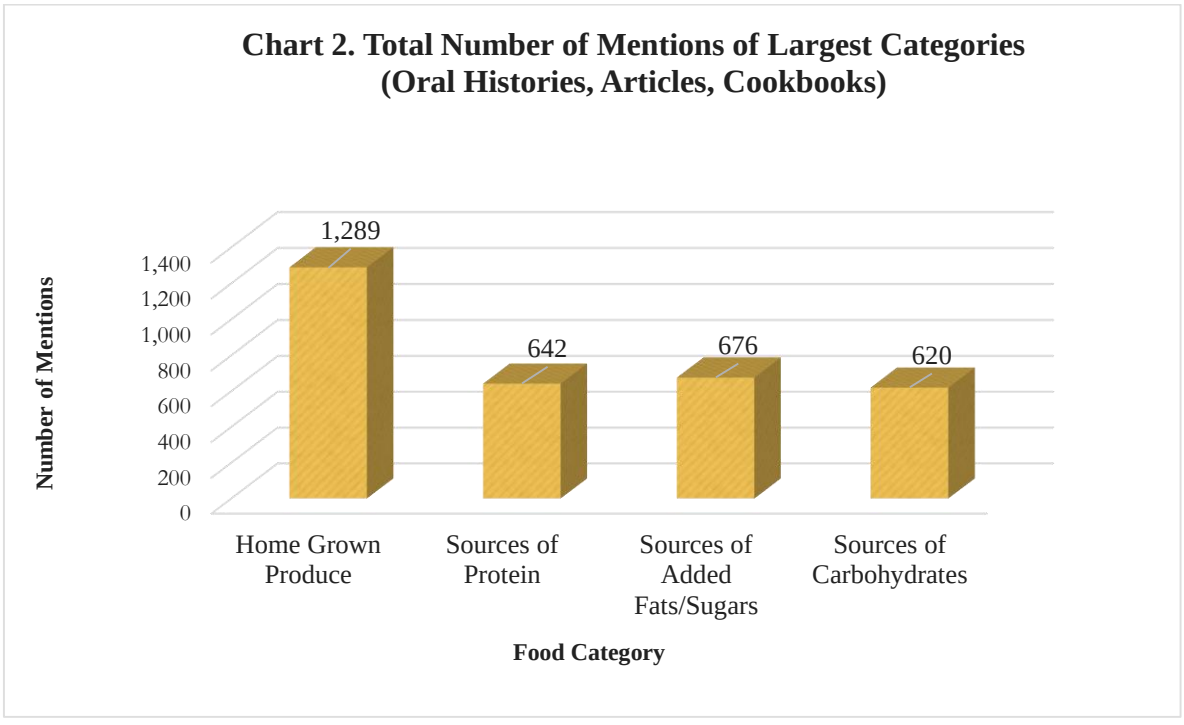
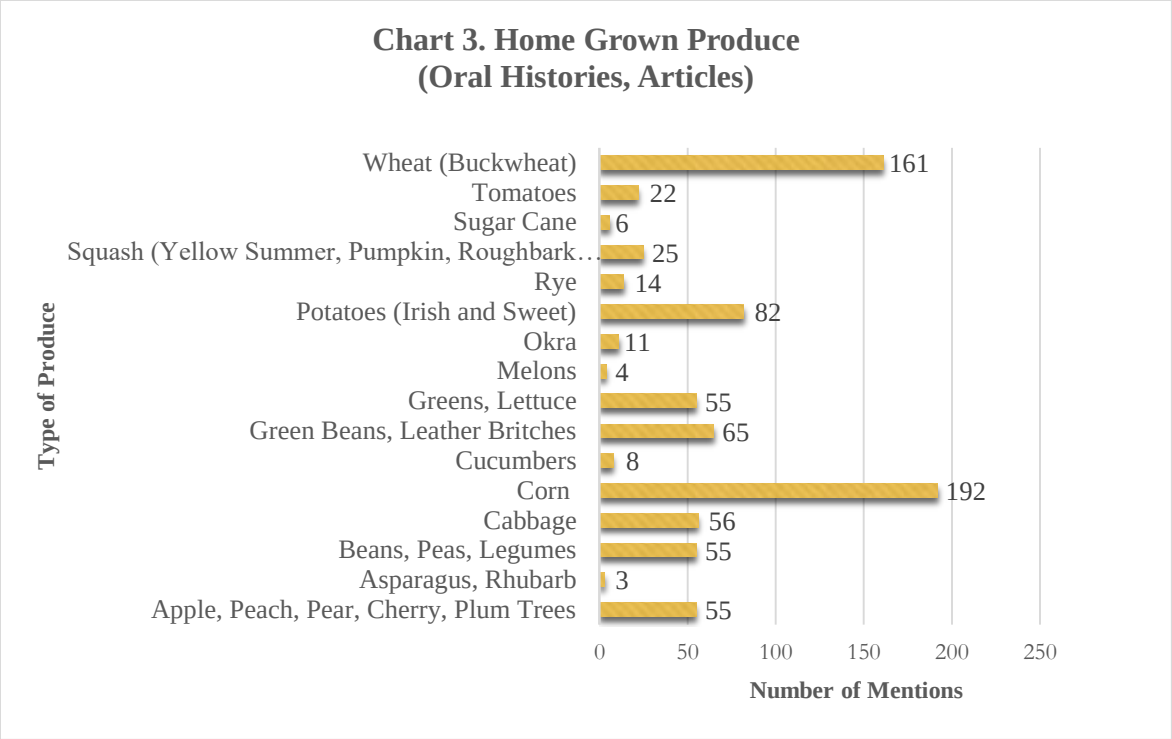


Chart 2. Total Number of Mentions of Largest Categories
(Oral Histories, Articles, Cookbooks)
Number of Mentions
1,400
1,200
1,000
800
600
400
200
0
1,289
642
676
620
Home Grown Produce
Sources of Protein
Sources of Added Fats/Sugars
Sources of Carbohydrates
Food Category

Home Grown Produce

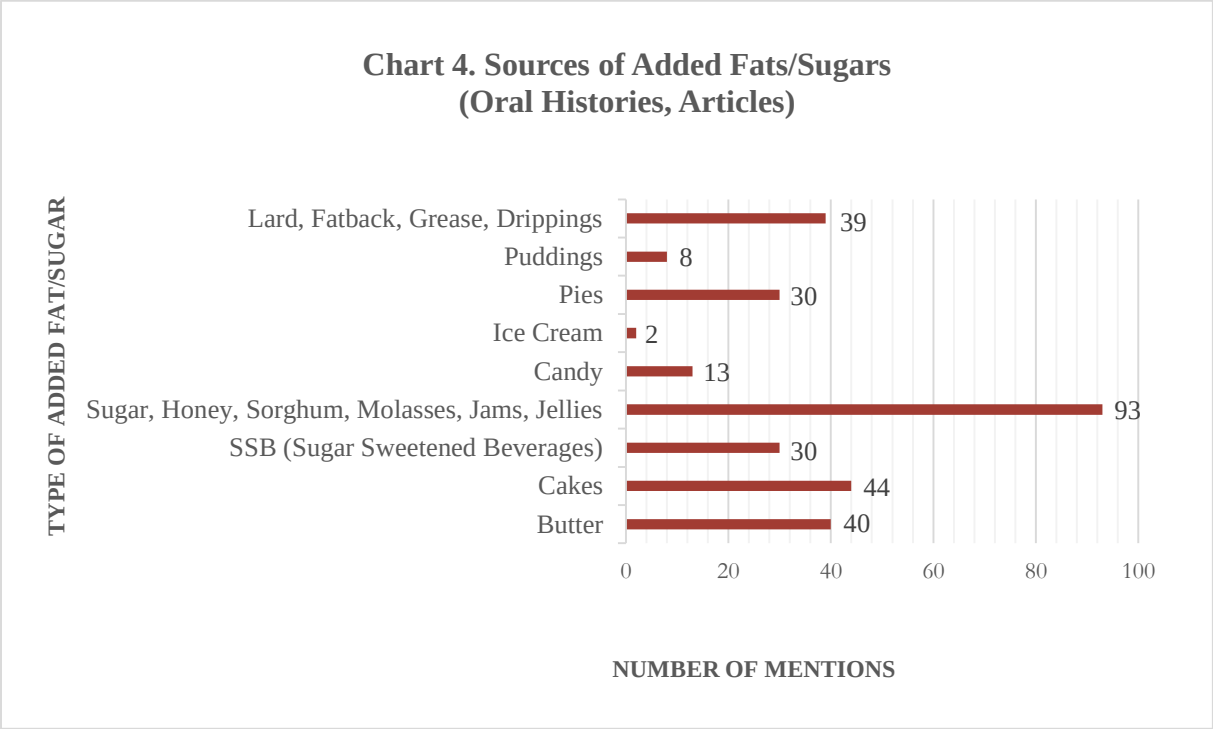
Chart 3 shows the breakdown of the largest category, home grown produce (34%), from oral histories and articles. Corn (192 mentions) and wheat (161 mentions) were indispensable in rural gardens, followed by potatoes (82 mentions). Green beans, (65 mentions) also known as “leather britches”, were eaten fresh out of the garden during summer and were also home canned or dried for consumption during the winter months. Cabbage (56 mentions) was eaten boiled, prepared as slaw, or fermented in large crocks to make sauerkraut. Greens and lettuce (55 mentions), beans, peas, and legumes (55 mentions), and tree fruits (55 mentions) were also often mentioned as produce grown on family land. Squash (25 mentions) and tomatoes (22 mentions) carry over from the Native American influence on traditional Appalachian foods.[22] Mentioned least but notably are rye (14 mentions), okra (11 mentions), cucumbers (8 mentions), sugar cane (6 mentions), melons (4 mentions), and asparagus and rhubarb (3 mentions). The wide variety of home grown produce reflects a nutrient-rich diet.



Sources of Fats/Added Sugars

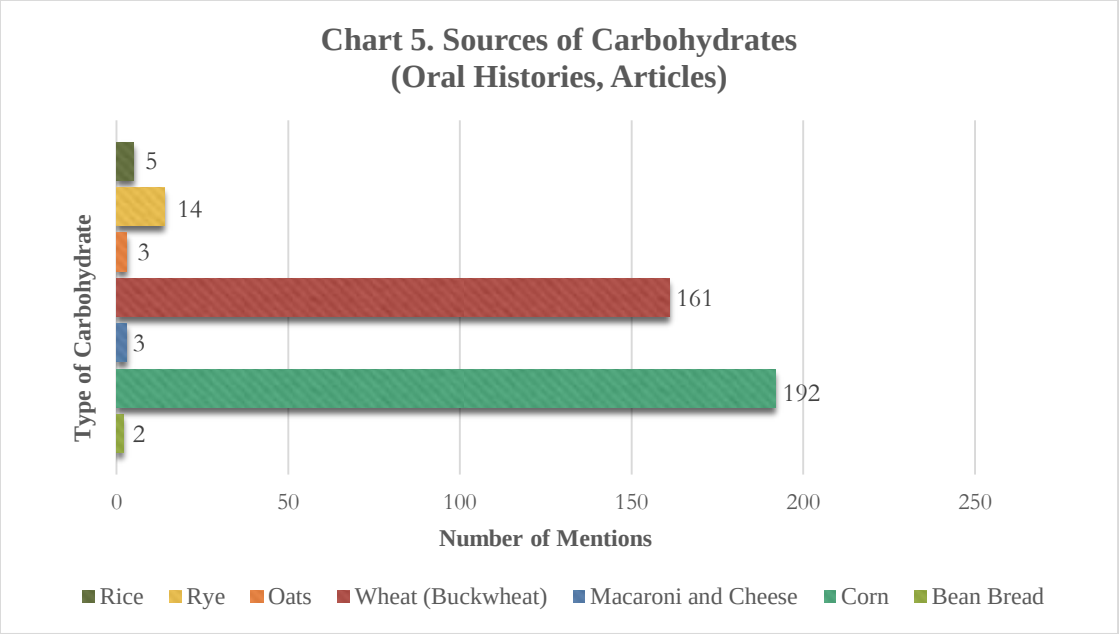
Sources of added fats and sugars (18%) were the second largest category in the traditional Appalachian diet (see Chart 4), and sugar, honey, sorghum, molasses, and homemade jams and jellies (93 mentions) were the largest source of added sugars. Consumption of cakes (44 mentions) and the use of butter (40 mentions) was frequent, and both were made in the kitchens of rural mountaineers with ingredients obtained at home. Lard, fatback, bacon grease, and meat drippings (39 mentions) were added to vegetable dishes and used in preparing pies (30 mentions) and breads. Sweet tea and soft drinks fall into the sugar sweetened beverages category (30 mentions) although these were consumed less frequently than by today's rural populations.[30] Candy (13 mentions), puddings (8 mentions), and ice cream (2 mentions) were the sweets least consumed. As the second largest category in the traditional diet, oral histories and articles disclose that although consumed

often, sources of added fats and sugars were usually prepared using fresh ingredients that required plenty of physical activity to source.



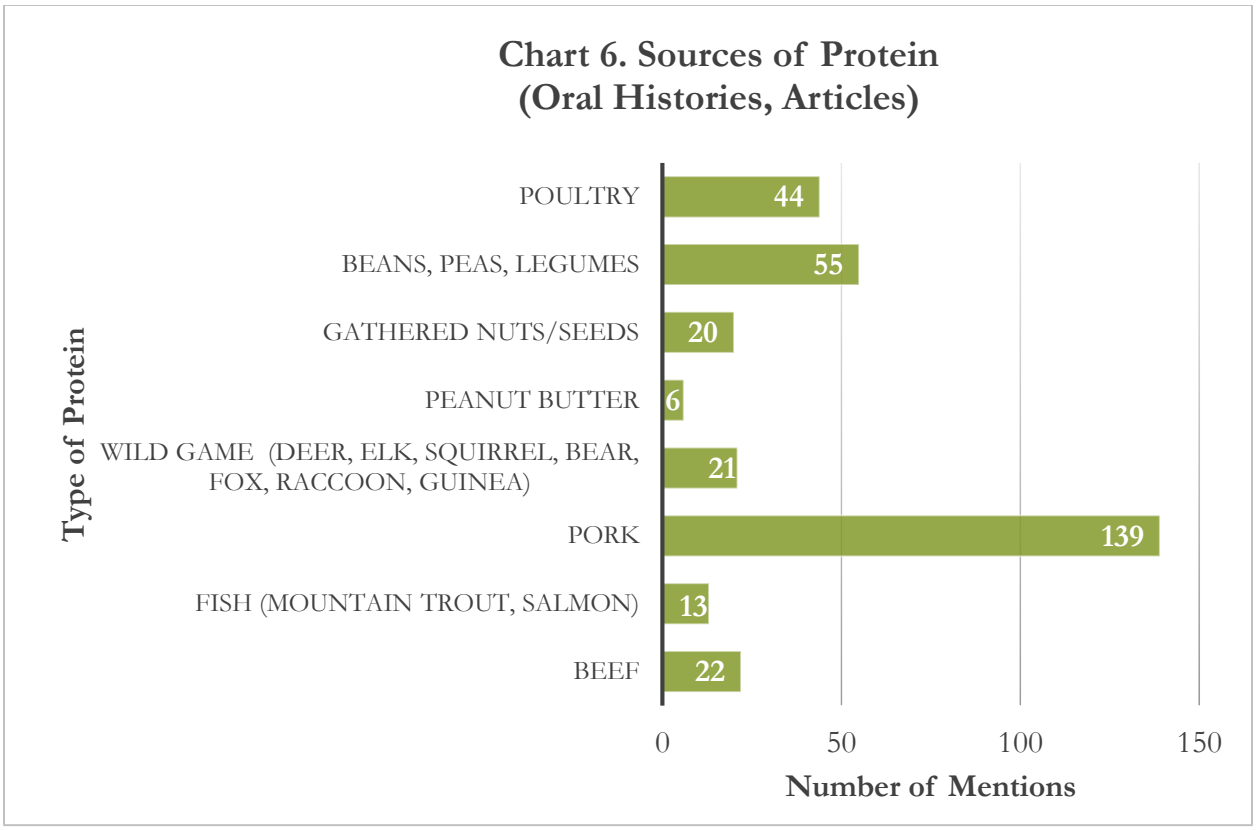
Sources of Carbohydrates

Sources of carbohydrates made up 16% of the traditional Southern Appalachian diet. The use of corn (192 mentions) and wheat (161 mentions) drastically surpasses other sources of carbohydrates (see Chart 5) and these were ground into meal and flour for baking biscuits and cornbread and for frying Johnny Cakes. Flour was also used to make dumplings and pancakes. To note, oral histories use wheat and buckwheat interchangeably with the exception of specifically identifying the use of buckwheat for preparing pancakes. Rye (14 mentions) was ground into flour to make loaf bread or used in brewing beer. Rice (5 mentions), oats (3 mentions), macaroni and cheese (3 mentions), and Native American bean bread (2 mentions) were sources of carbohydrates with the fewest numbers of mentions.



Sources of Protein

Pork (139 mentions) was the most consumed source of protein in the traditional Appalachian diet (see Chart 6), and hogs were usually raised on family land. The annual slaughter of hogs was often a community event, and oral histories offer detailed descriptions of the process, from the hog's final breath to using up the last remaining bits of meat in making livermush. Soup beans or pinto beans, peas, and other legumes (55 mentions) were the next largest source of protein in the traditional diet. Oral histories described pork-based products like livermush, bacon, or sausage being eaten for breakfast then soup beans for both the midday and the evening meals, strengthening the argument that the traditional diet was mostly plant-based.[18] Poultry (44 mentions) and beef (22 mentions) were the next most frequently consumed sources of protein, followed closely by wild game (21 mentions) and gathered nuts and seeds (20 mentions). Mentions of mountain trout and salmon reflect that fishing (13 mentions) was another activity in rural Appalachia. Peanut butter (6 mentions) was also consumed on occasion.



Discussion & Suggestions for Future Research

Findings and Discussion

Results of qualitative analysis are telling in what they reveal about the traditional Appalachian diet. The largest food category home grown produce (34%) discloses that unlike few consumers today, mountaineers in the early 20th century were eating a plant-based diet (see Figure 3 for menu). Though the two largest individual foods in this category were corn and wheat which were rich sources of carbohydrates, products prepared with these staple crops were minimally processed, retaining the majority of their fiber and micronutrient content. Protein (17%) and carbohydrate sources (16%) came in third and fourth respectively as the largest food categories in the traditional diet. Home-butchered and home-cured pork (hams, chops, sausage, bacon, livermush), beans, and various species of poultry served as major protein sources. Previous research has confirmed the consumption of a variety of foods

such as eggs, milk, gathered greens, and sugar sweetened beverages (sweet tea and soft drinks).[5]

An unexpected discovery from this research is that the second largest source of calories in the traditional Appalachian diet was added fats and sugars (18%). Recipes detail the use of adding meat drippings, lard, and fatback in preparing vegetable dishes and baked goods.[2, 9-16, 31] Conversations abound with rural Appalachians describing pouring homemade molasses on top of hot buckwheat pancakes or spreading fresh butter and home canned fruit jams on warm biscuits and hoecakes.[5, 18, 19] What stands out is that while traditional meals were quite energy dense, they were prepared using ingredients rural populations grew, gathered, or hunted themselves. Oral histories describe the typical meal pattern: two hearty meals during the day followed by a smaller meal before bed. The physical requirements needed to grow, gather, hunt, and then prepare meals would play an advantageous role in health outcomes of rural populations. This suggests that the physically demanding daily lives of mountaineers a century ago possibly played a direct role in reducing chronic disease, even with a diet containing numerous added fats and sugars.

Figure 3. 3-Day Menu

Day	Breakfast	Lunch	Dinner/Supper
Sunday	Sawmill sausage gravy, Biscuits, Eggs, Fried apples, Sliced tomatoes	Baked chicken or ham, Biscuits or cornbread with butter, jam, apple butter, Green beans or cooked greens seasoned with	Leftover biscuits with jam or apple butter Milk, water

	Coffee, milk, water	fatback, Mashed potatoes with gravy, Berry cobbler or apple stack cake Coffee, milk, water	
Monday	Biscuits, Fried livermush, Eggs, Fried apples Coffee, milk, water	Soup beans seasoned with fatback, Cornbread with butter, Fried potatoes, Kilt lettuce: field greens seasoned with onions, vinegar, and bacon grease Coffee, milk, water	Leftovers from lunch or Cornbread with buttermilk Milk, water
Tuesday	Buckwheat pancakes with molasses or honey, Bacon, Eggs, Fresh sliced peaches Coffee, milk, water	Soup beans seasoned with fatback, Cornbread with butter, Green beans or cooked greens seasoned with fatback, Cooked cabbage Coffee, milk, water	Leftovers from lunch Milk, water

Future Research

Outcomes of this study provide the opportunity for several areas of future research. Focusing first on the long-term objectives of this project, results from this research highlight the value of cultural competence in understanding rural patients' food choices and their beliefs about the impact eating habits have on health and disease prevention. Future research endeavors can utilize these findings for developing culturally-sensitive nutrition interventions to measure feasibility, acceptance, and eventually health outcomes in rural patients seeking diet therapy. Further research may entail a thorough examination of the correlation between food choices and the role the additional facets of the TSADP have on health outcomes of rural patients.

Another area of interest explores the current role of family physicians in providing comprehensive care for rural patients that includes diet recommendations for improving health outcomes. Research shows that because of limited access to health care for most rural Appalachians, primary care physicians are often the only professional accessed for care.[32] One study examined the challenges faced by a mobile medical unit staffed with family nurse practitioners and nursing students who offered basic medical services to rural under and uninsured residents making recommendations to visit specialists as deemed necessary.[39] In reporting results, the only mention of nutrition recommendations made to patients were offering information about the location of food banks to patients reporting food insecurity. While this is important for those lacking access to enough food, practitioners failed to make any recommendations for visits to a registered dietitian, the health care professional who specializes in nutrition care. A suggestion for future research endeavors highlights rural health care research valuing input from all members of the interdisciplinary health care team

to enlighten those unfamiliar with the role the nutrition professional can play in implementing dietary interventions for disease maintenance in rural Appalachian patients.

Interestingly, there is also the potential for physicians and nutrition professionals to collaborate in a specific area of care for rural Appalachian patients. Appalachian folk medicine relies quite heavily on the use of plants, barks, and roots for treating disease thought to be caused by cold, damp, heat, dirt, pathological invaders, as well as spiritual transgressions or magic getting into the blood stream and causing illness.[28] There are numerous sources providing information about the origins of Appalachian folk medicine, recipes for which plants, barks, or roots to use for specific ailments, and oral histories providing countless examples of rural mountaineers practicing this traditional medicine.[18, 28] Research should focus on future health practitioners' knowledge of this subsystem of rural health care so that new physicians and nutrition professionals alike will have a working knowledge of folk medicine to assist in culturally-competent patient interactions and treatment options.

Strengths & Limitations

This research has two identifiable strengths. First, findings from this study further verify the TSADP, offering a more thorough examination of the historical Southern Appalachian diet using primary and secondary sources. This research also provides ample material for use in dietetics practice to develop culturally-sensitive interventions for rural patients pursuing diet therapy. While beneficial for future health professionals, there are limitations of this study. As is the nature of qualitative inquiry and analysis, the PI admits using subjective opinion when coding cookbooks used for this research. Recipes were coded based on title and ingredient list referencing food items on the TSADP. For this reason, the

number of mentions from cookbooks is not reflected in Charts 3-6. Additionally, primary and secondary sources analyzed do not necessarily apply directly to the Appalachian counties of western North Carolina with the exception of participants in the W.L. Eury Appalachian Collection's Oral History Project who were born, raised, and spent their entire lives in this portion of Appalachia. There are also several possible sources of bias in these sources. It is possible in collecting oral histories that the interviewer asked leading questions of participants, yielding skewed responses. A second potential source of bias is in the ethnographic articles, where information deemed unnecessary or conflicting with desired research objectives or outcomes might have been excluded. Third, while cookbooks had less direct dialogue, authors retained the ability to pick and choose which recipes to include which begs the possibility of important traditional recipes being excluded. The strengths of this research have been weighed against the limitations, and the findings still offer reliable outcomes for consideration.

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Vita

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